TM 3-4240-267-35

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

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DS, GS, AND DEPOT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

FILTER UNIT, GAS-PARTICULATE EMD, 600 CFM, M46

This copy is a reprint which includes current pages from Changes 1 and 2.

HEADQUARTERS, DEPARTMENT OF THE ARMY

MAY 1970

WARNINGS

The gas filters of the M46 filter unit will not protect against the carbon monoxide exhaust of an internal engine.

Turn electrical power OFF before inspecting or performing maintenance on the filter unit.

When removing or disposing of contaminated filters, protective clothing (TM 10–277) will be worn. Necessary safety precautions must be followed, including those for decontaminating, before the new filters are installed (TM 3–220). The necessary protective clothing and safety precautions will be prescribed by the officer in charge.

TECHNICAL MANUAL
No. 3-4240-267-35

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., *20 May 1970*

DS, GS, and Depot Maintenance Manual

(Including Repair Parts and Special Tools List)

FILTER UNIT, GAS–PARTICULATE: EMD, 600 CFM, M46

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WARNING

To remove the possibility of injury to maintenance personnel, turn electrical power **OFF** before inspecting or performing maintenance on the filter unit

WARNING

To guard against their becoming chemical casualties person removing or disposing of CB agent contaminated filters must wear protective clothing (TM 10-277) Necessary safety precautions must be followed, including those for decontaminating, before the new filters are installed (TM 3-220). The necessary protective clothing and safety precautions will be prescribed by the officer in charge.

WARNING

To avoid possible asphyxiation assure that the exhaust of an internal combustion engine does not pass over the air intake of the M46 filter unit. The gas filter of the M46 filter unit will not protect against the carbon monoxide in the exhaust fumes.

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

These instructions are for use by direct support, general support, and depot maintenance personnel. They apply to the Filter Unit, Gas-Particulate: EMD, 600 cfm, M46 (fig. 1-1).

1-2. Record and Report Forms

a. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750.

b. The reporting of errors, omissions, and recommendations for improving this manual by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to Commanding Officer, Edgewood Arsenal, ATTN: SMUEA-TSE-TP, Edgewood Arsenal, Md. 21010.

1-3. Maintenance Level and Allocation

The repair parts and special tools list (app B) contains the maintenance authorized for direct support, general support, and depot maintenance personnel. TM 3-4240-265-20P lists the repair parts, support equipment, and special tools required to perform organizational maintenance. TM 3-4240-265-12 contains the maintenance allocation chart.

Section II. DESCRIPTION AND DATA

1-4. Description

TM 3-4240-265-12 describes the M46 filter unit.

1-5. Tabulated Data

TM 3-4240-265-12 lists tabulated data for the M46 filter unit.

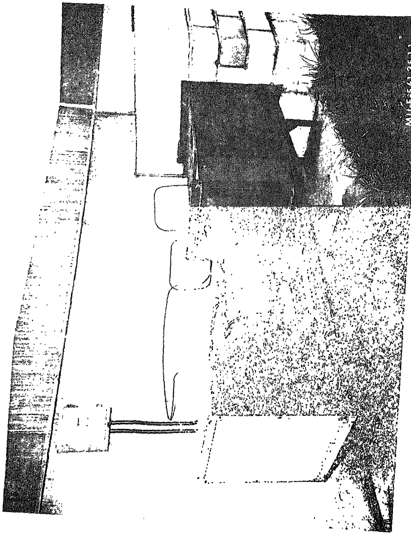


Figure 1-1. M46 600 cfm EMD gas-particulate filter unit.

CHAPTER 2

DIRECT SUPPORT MAINTENANCE INSTRUCTIONS

Section I. INLET TRANSITION ASSEMBLY

WARNING

Turn electrical power OFF before inspecting or performing maintenance on the filter unit.

2–1. Louver Assembly

a. Maintenance. Direct support maintenance personnel are authorized to replace the louver-assembly springs and attaching hardware.

b. Removal and Disassembly.

(1) Remove the 10 locking nuts (4, fig. 2–1) and screws (1) from the louver assembly (2).

(2) Remove the louver assembly.

(3) Remove the screws (27) and springs (28).

c. Assembly and Installation.

(1) Attach the springs (28) to the louver assembly with screws (27).

(2) Install louver assembly (2). Attach it with screws (1) and locking nuts (4).

2–2. Floor Flange and Gaskets

a. Maintenance. Direct support maintenance personnel are authorized to replace the floor flange (9, fig. 2–1), gaskets (8 and 25), and attaching hardware.

b. Removal and Disassembly.

(1) Remove locking nuts (4) and screws (1).

(2) Remove louver assembly (2).

NOTE

Filter assemblies may have cam locks (26) which must be opened.

(3) Using the two handles on the airmat filter assembly (3), remove it from the inlet transition assembly (5).

(4) Remove and replace the floor flange (9), gasket (8), and attaching hardware as follows:

NOTE

If floor flange is riveted, replace rivets with screws.

(*a*) Disconnect floor flange.

(*b*) Remove the four nuts (6), washers (7) and screws (10).

(*c*) Remove floor flange and gasket. Clean gasket and adhesive residue from transition assembly surface.

(5) Remove felt gasket (25) from inside the transition assembly. Clean gasket and adhesive residue from the flanged surface.

c. Assembly and installation.

(1) Make a felt gasket (fig. 2–2) for inside the transition assembly.

(2) Apply adhesive to the flanged surface of the transition assembly.

(3) Apply adhesive to flange side of felt gasket. Install gasket in the transition assembly so that a complete seal is made, especially in each corner.

(4) Install the floor flange (9, fig. 2–1), gasket (8), and attaching hardware as follows:

(*a*) Apply adhesive to one side of gasket (8) and to mating surface of transition assembly. Aline holes and place the adhesive side of the gasket onto the transition assembly.

(*b*) Apply adhesive to the exposed side of the gasket and the mating surface on the floor flange.

(*c*) Aline holes and place the floor flange on top of the gasket.

(*d*) Install the four screws (10), washers (7), and nuts (6).

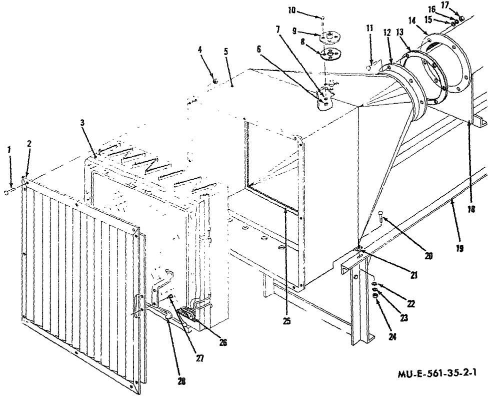
(*e*) Connect the floor flange.

(5) Using the two handles on the prefilter assembly, install the airmat filter assembly.

NOTE

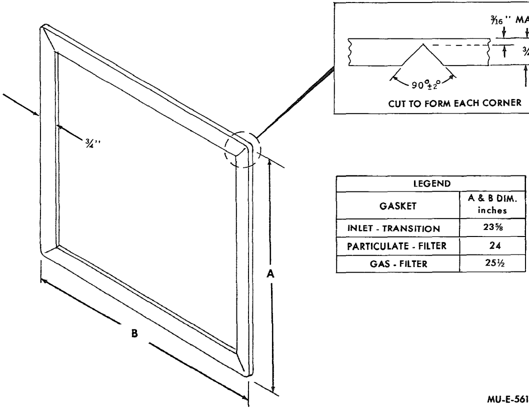
Handles should be located at top and bottom with pleats of airmat vertical.

(6) Install louver assembly (2), screws (1), and locking nuts (4).



1 Screw	5 Inlet transition assembly	9 Floor flange	13 Gasket	17 Nut	21 Angle	25 Gasket
2 Louver assembly	6 Nut	10 Screw	14 Vaneaxial fan	18 Cradle support	22 Washer	26 Cam lock
3 Airmat filter assembly	7 Washer	11 Screw	15 Washer	19 Rail	23 Lockwasher	27 Screw
4 Locking nut	8 Gasket	12 Transition flange	16 Lockwasher	20 Screw	24 Nut	28 Spring

Figure 2–1. Louver, airmat filter, and inlet-transition assemblies, exploded view.



LEGEND	
GASKET	A & B DIM. inches
INLET - TRANSITION	23 5/8
PARTICULATE - FILTER	24
GAS - FILTER	25 1/2

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Figure 2–2. Inlet-transition, gas-filter, and particulate-filter gaskets.

Section II. VANEAXIAL FAN

WARNING

Turn electrical power OFF before inspecting or performing maintenance on the filter unit.

2-3. Electric Motor Junction Box Assembly

a. Maintenance. Direct support maintenance personnel are authorized to replace condulet, gaskets, cover, and attaching hardware.

b. Removal and Disassembly.

(1) Remove cover (3, fig. 2-3) and screws (2).

(2) Remove gasket (4).

(3) Identifiy and disconnect the electrical wires (10).

(4) Remove two screws (5), washers (6), and connector nut (7).

(5) Remove condulet (8) from conduit (1).

(6) Remove gasket (9).

(7) Clean gasket and adhesive residue from all surfaces

c. Assembly and Installation.

(1) Apply adhesive to both sides of gasket (9).

(2) Installation is the reverse of removal (*b* above).

2-4. Vaneaxial Fan

a. Maintenance. Direct support maintenance personnel are authorized to replace the vaneaxial fan, gaskets, and attaching hardware.

b. Removal and Disassembly.

(1) Remove cover (3, fig. 2-3) and screws (2).

(2) Remove gasket (4).

(3) Identify and disconnect the electrical wires (10).

(4) Remove condulet (8) and gasket (9) by removing screws (5), washers (6), and connector nut (7).

(5) Loosen two nuts (24, fig. 2-1).

(6) Remove 12 nuts (16, fig. 2-3), lockwashers (15), washers (14), and screws (12) from vaneaxial fan (18) and inlet and outlet transition assemblies (11 and 19).

(7) Slide inlet transition assembly away from vaneaxial fan.

(8) Loosen four nuts (16) that are under the supporting rail (21) and cradle support (20).

(9) Remove vaneaxial fan (18) from the cradle supports (20).

c. Cleaning.

(1) Remove gaskets and gasket residue from the mounting flanges of the fan and the inlet and outlet transition assemblies.

(2) Wipe the inside opening in the inlet and outlet transition assemblies with a damp cloth to remove dust and dirt that may have settled on the inside.

d. Assembly and Installation.

(1) Position vaneaxial fan on the cradle supports (20) so that the AIRFLOW markings are facing toward the outlet transition assembly (19).

(2) Aline holes and install gasket (13) between the vaneaxial fan and outlet transition assembly.

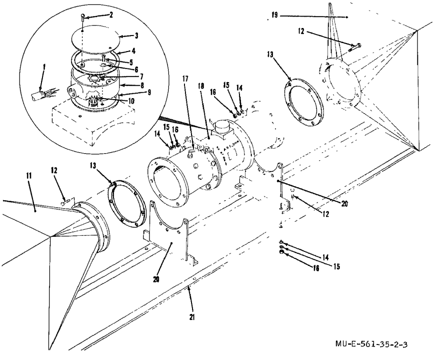
(3) Slide the vaneaxial fan against the gasket. Intall six screws (12), washers (14), lockwashers (15), and nuts (16).

(4) Aline holes and install gasket (13) between the vaneaxial fan and inlet transition assembly.

(5) Slide the inlet transition assembly against the gasket and install six screws (12), washers (14), lockwashers (15), and nuts (16).

(6) Tighten all screws and nuts that support the inlet transition assembly and vaneaxial fan on the rails.

(7) Reassemble electric motor junction box assembly (para 2-3*c*).



1 Conduit
2 Screw
3 Cover
4 Gasket
5 Screw
6 Washer
7 Connector nut
8 Condulet
9 Gasket
10 Electrical wires
11 Inlet transition assembly
12 Screws
13 Gaskets
14 Washers
15 Lockwashers
16 Nuts
17 Flow regulator lever
18 Vaneaxial fan
19 Outlet transition assembly
20 Cradle supports
21 Supporting rail

Figure 2-3. Vaneaxial fan, exploded view.

Section III. OUTLET TRANSITION ASSEMBLY

WARNING

To remove the possibility of injury to maintenance personnel, turn electrical power OFF before inspecting or performing maintenance on the filter unit.

WARNING

To guard against their becoming chemical casualties person removing or disposing of CB agent contaminated filters must wear protective clothing (TM 10-277). Necessary safety precautions must be followed, including those for decontaminating, before the new filters are installed (TM 3-220). The necessary protective clothing and safety precautions will be prescribed by the officer in charge.

2-5. Outlet Transition Assembly

a. Maintenance. Direct support maintenance personnel are authorized to replace the gasket on the transition assembly frame and the gaskets on the filter adapter.

b. Removal and Disassembly.

(1) Loosen four nuts (16, fig. 2-3) that are under the supporting rail (21).

(2) Loosen two nuts (4, fig. 2-1).

(3) Remove tie rod (11, fig. 2-4), nut (9), and washer (10)

(4) Remove tie rod (23), nut (25), and washer (24).

(5) Loosen nut (3) and washer (4) on lower tie rod (5).

(6) Loosen nut (28) and washer (27) on lower tie rod (26).

(7) Remove particulate filter (16) Place filter in an area where it will not be damaged

(8) Remove gasket (12) from the outlet transition assembly (6). Clean gasket and adhesive residue from frame surface

(9) Remove filter adapter (17) Inspect both gaskets for possible damage and deterioration

(10) If gaskets are unserviceable, remove gaskets (12 and 18) from the filter adapter (17) Clean gasket and adhesive residue from all surfaces.

c. Assembly and Installation.

(1) Make a gasket (18) as shown in figure 2-2

(2) Apply adhesive to one side of the filter adapter (17, fig 2-4)

(3) Apply adhesive to one side of gasket Install gasket on adhesive surface of the filter adapter Install each end of the gasket so a complete seal is made, especially in each corner of the filter adapter.

(4) Make two gaskets (12, fig. 2-4) as shown in figure 2-2.

(5) Apply adhesive to remaining side of the filter adapter (17, fig. 2-4) for the gasket (12). Apply adhesive to the mating surface of the outlet transition assembly (6) for the gasket (12).

(6) Apply adhesive to one side of gasket (12). Install gasket on adhesive surface of the filter adapter. Install each end of the gasket so that a complete seal is made, especially in each corner.

(7) Apply adhesive to one side of gasket (12). Install gasket on adhesive surface of the transition assembly Install each end of the gasket so a complete seal is made, especially in each corner.

(8) Install the filter adapter (17) on the open end of the gas filter assembly (20).

(9) Place the particulate filter (16) on the rails with airflow indicator pointing toward gas filter. Particulate filter separators shall be in a vertical position.

(10) Slide the particulate filter toward the filter adapter Mate edge of the particulate filter with the gaskets on the transition assembly and filter adapter.

(11) Install tie rods (11 and 23) with attaching hardware

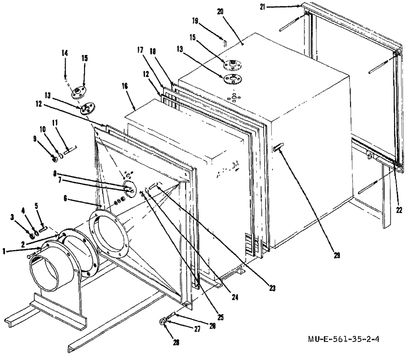
(12) Tighten and torque four tie rod nuts that are located on the corners of the outlet transition assembly outlet frame. Torque nuts to 100 inch-pounds.

(13) Tighten four nuts (16, fig. 2-3).

(14) Tighten two nuts (24, fig. 2-1).

2-6. Floor Flange and Gasket

a. Maintenance Direct support maintenance personnel are authorized to replace the floor flange (15, fig. 2-4), gasket (13), and attaching hardware that are located on



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1 Vaneaxial fan flange
2 Gasket
3 Nut
4 Washer
5 Tie rod
6 Outlet transition assembly
7 Nut
8 Lockwasher
9 Nut
10 Washer

11 Tie rod
12 Gaskets
13 Gaskets
14 Screw
15 Floor flanges
16 Particulate filter
17 Filter adapter
18 Gasket
19 Wood screw
20 Gas filter assembly

21 Plenum stack frame
22 Gasket
23 Tie rod
24 Washer
25 Nut
26 Tie rod
27 Washer
28 Nut
29 Catch

Figure 2-4. Outlet transition and filter assemblies, exploded view

the outlet transition assembly (6).

b Removal and Disassembly.

(1) Remove particulate filter (16) (para 2-5b(1) through (7)).

(2) Remove and replace the floor flange (15), gasket (13), and attaching hardware as follows:

(*a*) Disconnect the floor flange.

(*b*) Remove four screws (14), Lockwashers (8), and nuts (7).

(*c*) Remove floor flange (15) and gasket (13). Clean gasket and adhesive residue from all surfaces.

c. Assembly and Installation.

(1) Apply adhesive to the mating surface of the transition assembly.

(2) Apply adhesive to one side of the gasket (13). Aline holes and place the gasket on the transition assembly.

(3) Apply adhesive to the top of the gasket and the mating surface of the floor flange (15). Aline the holes and place the floor flange on top of the gasket.

(4) Install the four screws (14), lockwashers (8) and nuts (7).

(5) Connect the floor flange.

(6) Install the removed particulate filter (para 2-5c(9) through (13)).

Section IV. PLENUM STACK FRAME AND TIE RODS

WARNING

To remove the possibility of injury to maintenance personnel, turn electrical power OFF before inspecting or performing maintenance on the filter unit.

WARNING

To guard against their becoming chemical casualties person removing or disposing of CB agent contaminated filters must wear protective clothing (TM 10-277). Necessary safety precautions must be followed, including those for decontaminating, before the new filters are installed (TM 3-220). The necessary protective clothing and safety precautions will be prescribed by the officer in charge.

2-7. Plenum Stack Frame

a. Maintenance. Direct support maintenance personnel are authorized to replace the plenum stack frame, angles, gasket, and attaching hardware.

b. Removal and Disassembly.

(1) Loosen four nuts (16, fig. 2-3) that are under the supporting rail (21).

(2) Loosen two nuts (24, fig. 2-1).

(3) Remove four tie rods (5, 11, 23, and 26. fig. 2-4) and attaching nuts and washers.

(4) Disconnect floor flange (15).

(5) Remove particulate filter (16), filter adapter (17), and gas filter assembly (20)

c. Inspection.

(1) Check the plenum stack frame (21) for damage and rust. Check the threads in each lug

(2) Check gasket for damage and deterioration.

(3) Replace defective parts and gaskets if they are found to be unserviceable (*d* below).

d. Assembly and Installation.

(1) Using the removed assembly as a template, make and assemble a plenum stack frame (fig. 2-5). Do not install the gasket at this time. Refer to TM 9-237 for welding information.

(2) Make a gasket (fig. 2-2).

(3) Clean the frame and paint it with olive-drab lusterless paint (No. X-34087, MIL-STD-171). See TM 9-213 for cleaning and painting instructions.

(4) Apply adhesive to the mating surface of the stack frame.

(5) Apply adhesive to one side of gasket. Install gasket on stack frame so that a complete seal is made, especially in each corner.

(6) Install stack frame to the plenum chamber opening.

(7) Install removed gas filter assembly (20, fig. 2-4).

(8) Install filter adapter (17).

(9) Install particulate filter (16).

(10) Install the four tie rods (5, 11,

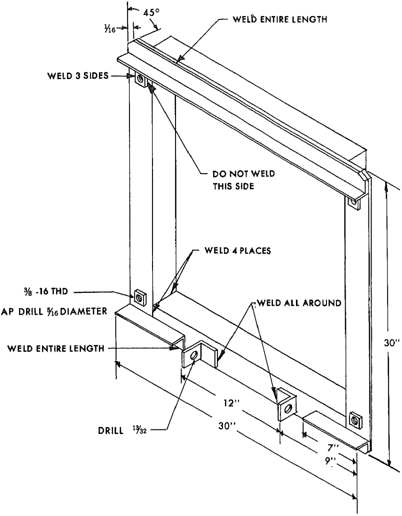

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Figure 2-5. Plenum stack frame.

23, and 26) with washers and nuts. Do not tighten nuts.

(11) Torque the nuts at the transition assembly to 100 inch-pounds.

(12) Tighten two nuts (24, fig. 2-1).

(13) Tighten four nuts (16, fig. 2-3) that are under the supporting rail (21).

2-8. Tie Rods

a. Maintenance. Direct support maintenance personnel are authorized to replace the tie rods (5, 11, 23, and 26, fig. 2-4) and attaching hardware.

b. Inspection.

(1) Inspect the four tie rods for excessive rust and possible damage.

(2) Check threads at both ends of each rod for damage and excessive rust. Check attaching hardware for damaged and missing parts. Replace unserviceable and missing parts.

c. Removal and Disassembly.

(1) Remove nuts (3, 9, 25, and 28) and washers (4, 10, 24, and 27) that hold the tie rod to the outlet transition assembly (6).

(2) Remove tie rods.

(3) Make tie rods as necessary (fig. 2-6).

d. Assembly and Installation.

(1) Install the tie rods in the plenum stack frame.

(2) Install washers (4, 10, 24, and 27, fig. 2-4) and nuts (3, 9, 25, and 28).

(3) Torque the nuts at the transition assembly to 100 inch-pounds.

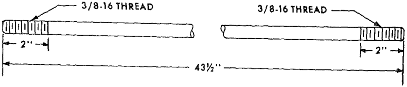

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Figure 2-6 Tie rod.

Section V. GAS FILTERS AND PARTICULATE FILTERS

WARNING

To remove the possibility of injury to maintenance personnel, turn electrical power OFF before inspecting or performing maintenance on the filter unit.

WARNING

To guard against their becoming chemical casualties person removing or disposing of CB agent contaminated filters must wear protective clothing (TM 10-277). Necessary safety precautions must be followed, including those for decontaminating, before the new filters are installed (TM 3-220). The necessary protective clothing and safety precautions will be prescribed by the officer in charge.

WARNING

To avoid possible asphyxiation assure that the exhaust of an internal combustion engine does not pass over the air intake of the M46 filter unit. The gas filter of the M46 filter unit will not protect against the carbon monoxide in the exhaust fumes.

2-9. Gas Filters

Organizational maintenance personnel will notify direct support maintenance personnel when contaminated gas filters are to be replaced.

2-10. Particulate Filters

Ordinarily, the particulate filters will be replaced when the gas filters are replaced. However, if inspections show the particulate filters are serviceable, they may be retained for further use. A chemical officer will determine if the filters are serviceable.

2-11. Maintenance

Direct support maintenance personnel are authorized to replace gas filters and particulate filters. They are also authorized to modify the new gas filters prior to installation.

a. Removal and Disassembly.

(1) Loosen four nuts (16, fig. 2-3) that are under the supporting rail (21).

(2) Loosen two nuts (24, fig. 2-1).

(3) Remove four tie rods (5, 11, 23, and 26, fig. 2-4) and attaching nuts and washers.

(4) Remove particulate filter (16), filter adapter (17), and gas filter assembly (20).

(5) Disconnect and remove floor flange (15), gasket (13), and wood screws (19). Clean gasket and adhesive residue from flange surface.

NOTE

Reinstall floor flange on the new gas filter (*b*(4) below).

b. Modification. The C22R1 gas filter is the stock item that is used to replace the original C22 gas filter. The C22R1 gas filter is 2 1/4 inches shorter than the C22 filter. Before installing the C22R1 filter, perform the following:

CAUTION

Handle filter with care to prevent damage.

(1) Drill a 7/16-inch-diameter hole in the top of the C22R1 gas filter (location is the same as on removed filter).

(2) Apply adhesive to one side of gasket (13, fig. 2-4) and the mating surface on top of the gas filter. Aline the holes and place the adhesive side of the gasket on the mating surface of the gas filter

(3) Apply adhesive to the top of the gasket (13) and the mating surface of the floor flange (15).

(4) Aline the holes and place the floor flange on top of the gasket

(5) Install the four wood screws (19)

(6) Remove the eight catches (29) from the C22R1 gas filter (four at each end of the gas filter).

(7) Modify the left- and right-hand rails (Para 2-12) before attempting to assemble and install the components of the filter unit (one-time modification).

c. Assembly and Installation.

(1) Place the gas filter on the rails. Slide the filter toward the plenum stack frame. Mate the edge of the filter with the gasket (22, fig. 2-4).

(2) Install the filter adapter (17). Aline the gasket (18) with the gas filter assembly (20).

(3) Place the particulate filter (16) on the rails with airflow indicator pointing toward gas filter. Particulate filter separators shall be in a vertical position

(4) Slide the particulate filter toward the filter adapter. Mate the edge of the filter with gasket (12).

(5) Move the transition assembly, with vaneaxial fan and inlet transition assembly attached, toward the particular filter. Mate the transition gasket with the edge of the particulate filter

(6) Install four tie rods (5, 11, 23, and 26) with washers and nuts. Do not tighten nuts.

(7) Torque the nuts at the transition assembly to 100 inch-pounds.

(8) Tighten two nuts (24, fig. 2-1).

(9) Tighten four nuts (16, fig. 2-3) that are under the supporting rail (21).

Section VI. SUPPORTING FRAME

WARNING

To remove the possibility of injury to maintenance personnel, turn electrical power OFF before inspecting or performing maintenance on the filter unit.

2-12. Modification of Rails

a. Maintenance. Direct support maintenance personnel are authorized to modify the right-hand (11, fig. 2-7) and left-hand (1) rails that support the filter unit.

b. Modification.

(1) Remove the particulate filter (16, fig. 2-4), filter adapter (17), and gas filter assembly (20) (para 2-11*a*).

(2) Remove support (2, fig. 2-7) by removing nuts (14), lockwashers (13), washers (12), and screws (3).

(3) Remove the nuts (24, fig. 2-1), lockwashers (23), washers (22), and screws (20) that attach the inlet transition assembly to the right- and left-hand rails

(4) Remove four screws (12, fig. 2-3), nuts (16), lockwashers (15), and washers (14) that hold the cradle support (20) to the supporting rails.

(5) Slide the vaneaxial fan and inlet transition assembly in either direction to expose the holes in the rails.

(6) Lengthen the slot 2 1/4 inches in the right- and left-hand rails in the direction shown in figure 2-8.

(7) Place the support (2, fig. 2-7) on the rails. Loosely install screws, washers, lockwashers, and nuts. Slide the support to the new location and tighten bolts and nuts.

(8) Complete the assembly and installation of the filter unit (para 2-11*c*).

2-13. Rails, Supports, and Gussets

a. Maintenance Direct support maintenance personnel are authorized to replace the right- and left-hand rails, including attaching supports and gussets. The rails, supports, and gussets are not stocked as replaceable items. Direct support maintenance personnel must make these items when it is necessary to replace them.

b. Removal and Disassembly. The following operations must be performed before the right- and left-hand rails are removed or replaced.

(1) Remove cover (3, fig. 2-3) and screws (2).

(2) Identify and disconnect the electrical wires (10).

(3) Remove two nuts (24, fig. 2-1), lockwashers (23), washers (22), and screws (20).

(4) Remove four nuts (16, fig. 2-3), lockwashers (15), washers (14), and screws (12) that hold the cradle supports (20) to the right- and left-hand rails.

(5) Remove four tie rods (5, 11, 23, and 26, fig. 2-4) and attaching hardware.

(6) Remove the following as an assembly: the inlet transition assembly, vaneaxial fan, and outlet transition assembly.

(7) Remove the particulate filter, filter adapter, and gas filter assembly.

(8) Remove support (2, fig. 2-7), screws (3), washers (12), lockwashers (13), and nuts (14).

(9) Remove right- and left-hand rails by removing screws (9), lockwashers (6), washers (4), and nuts (5).

(10) Remove gussets (18), rail supports (20), screws (19), lockwashers (16), washers (17), and nuts (15).

c. Manufacture.

(1) *Right- and left-hand rails.*

(*a*) Cut right- and left-hand rails to a length of 94 1/2 inches (fig. 2-8).

(*b*) Use the removed rails as a guide to locate slotted holes in the new rails. Slot holes as shown in detail A (fig. 2-8).

(*c*) Drill seven .404-inch-diameter holes.

(*d*) Clean the rails and paint them with olive-drab lusterless paint (No. X-34087, MIL-STD-171). See TM 9-213 for instructions.

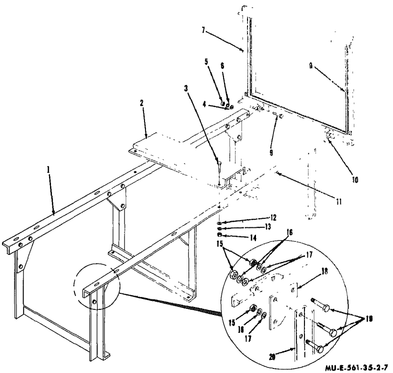
(2) *Rail supports.*

(*a*) Use the removed support as a template (fig. 2-9).

(*b*) Weld angles together (fig. 2-9). See TM 9-237 for welding instructions.

(*c*) Drill six .404-inch-diameter holes (fig. 2-9).

(*d*) Clean the support and paint it



1	Left-hand rail	6	Lockwasher	11	Right-hand rail	16	Lockwashers
2	Support	7	Plenum stack frame	12	Washer	17	Washers
3	Screw	8	Gasket	13	Lockwasher	18	Gusset
4	Washer	9	Screw	14	Nut	19	Screws
5	Nut	10	Angle	15	Nuts	20	Rail support

Figure 2-7 Rails and supports, exploded view

with olive-drab lusterless paint (No. X-34087, MIL-STD-171). See TM 9-213 for instructions.

(3) *Gussets.*

(*a*) Make reinforcing gusset (fig. 2-9).

(*b*) Drill three .404-inch-diameter holes.

(*c*) Clean gusset and paint it with olive-drab lusterless paint (No. X-34087, MIL-STD-171). See TM 9-213 for instructions.

(*d*) Assemble and install gussets as follows:

1. Install gussets (18, fig. 2-7) and rail supports (20) on right- and left-hand rails with screws (19), washers (17), lockwashers (16), and nuts (15).

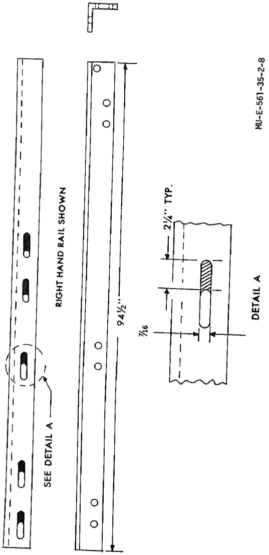
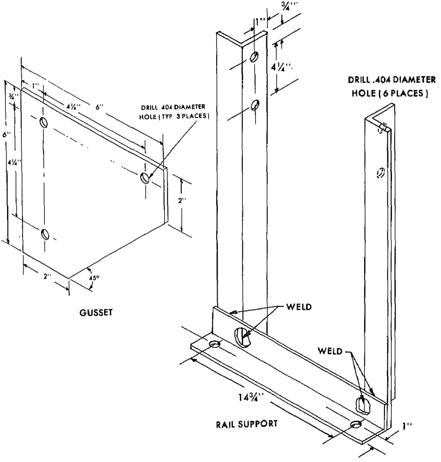


Figure 2-8. Rail modification.


3/4"
1"
4 1/4"
DRILL .404 DIAMETER HOLE (6 PLACES)
1"
3/4"
4 1/4"
6"
DRILL .404 DIAMETER HOLE (TYP 3 PLACES)
6"
4 1/4"
2"
2"
45°
WELD
WELD
14 3/4"
1"

GUSSET

RAIL SUPPORT

MU-E-561-35-2-9

Figure 2-9. Rail support and gusset.

2. Attach right- and left-hand rails to the plenum stack frame (7) with screws (9), washers (4), lockwashers (6), and nuts (5).

3. Install support (2), screws (3), washers (12), lockwashers (13), and nuts (14).

4. Install gas filter assembly (20, fig. 2-4), filter adapter (17), and particulate filter (16).

5. Place vaneaxial fan and transistion assemblies on rails.

6. Install the four tie rods with attaching hardware.

7. Tighten and torque four tie rod nuts that are located on the corners of the outlet transition assembly frame. Torque nuts to 100 inch-pounds.

8. Install four screws (12, fig. 2-3), washers (14), lockwashers (15), and nuts (16) that hold the cradle support (20) to the right- and left-hand rails.

9. Install two screws (20, fig. 2-1), washers (22), lockwashers (23), and nuts (24).

10. Connect the disconnected electrical wires (10, fig. 2-3).

11. Install cover (3) and screws (2).

CHAPTER 3

GENERAL SUPPORT AND DEPOT MAINTENANCE INSTRUCTIONS

3-1. General Support Maintenance

General support maintenance personnel are authorized to perform all maintenance services allocated to the operator, and organizational and direct support maintenance personnel.

3-2. Depot Maintenance

Depot maintenance personnel are authorized to perform all maintenance services described in this manual.

APPENDIX A

REFERENCES

TM 3-220	Chemical, Biological, and Radiological (CBR) Decontamination
TM 3-4240-265-12	Operator's and Organizational Maintenance Manual, Collective Protection Equipment, CBR: Nike-Hercules, CONUS, M11, M12, and M13
TM 3-4240-265-20P	Organizational Maintenance Repair Parts and Special Tools List, Collective Protection Equipment, CBR: Nike-Hercules, CONUS, M11 (FSN 4240-937-7030), M12 (FSN 4240-937-7031), and M13 (FSN 4240-937-7032)
TM 9-213	Painting Instructions for Field Use
TM 9-237	Operator's Manual: Welding Theory and Application
TM 10-277	Protective Clothing, Chemical Operations
TM 38-750	The Army Maintenance Management System (TAMMS)

APPENDIX B

DIRECT SUPPORT, GENERAL SUPPORT, AND DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Secton I. INTRODUCTION

B-1. Scope

This appendix lists repair parts, special tools, and special purpose test equipment required for the performance of direct support, general support, and depot maintenance of the Filter Unit, Gas-Particulate: EMD, 600 cfm, M46.

B-2. General

This Repair Parts and Special Tools List is divided into the following sections:

a. Repair Parts—Section II. A list of repair parts authorized for the performance of maintenance at the direct support, general support, and depot level in figure and item number sequence.

b. Special Tools, Test and Support Equipment—Section III. A list of special tools, test and support equipment authorized for the performance of maintenance at the direct support, general support, and depot level.

c. Federal Stock Number and Reference Number Index—Section IV. A list of Federal stock numbers in ascending numerical sequence followed by a list of reference numbers in ascending alpha-numeric sequence, cross-referenced to the illustration figure number and item number.

B-3. Explanation of Columns

The following provides an explanation of columns in the tabular lists in Sections II, III, and IV:

a. Source, Maintenance, and Recoverability Codes (SMR), Column 1.

(1) Source code, indicates the selection status and source for the the listed item. Source codes used are:

Code	*Explanation*
P	—Repair parts which are stocked in or supplied from the GSA/DSA, or Army supply system, and authorized for use at indicated maintenance categories.
P2	—Repair parts which are procured and stocked for insurance purposes because the combat or military essentiality of the end item dictates that a minimum quantity be available in the supply system.
P9	—Assigned to items which are NSA design controlled: unique repair parts, special tools, test, measuring, and diagnostic equipment, which are stocked and supplied by the Army COMSEC logistic system, and which are not subject to the provisions of AR 380-41.
P10	—Assigned to items which are NSA design controlled: *special tools, test, measuring* and diagnostic equipment for COMSEC support, which are accountable under the provisions of AR 380-41, and which are stocked and supplied by the Army COMSEC logistic system.
M	—Repair parts which are not procured or stocked, but are to be manufactured in indicated maintenance levels.
A	—Assemblies which are not procured or stocked as such, but are made up of two or more units. Such component units carry individual stock numbers and descriptions, are procured and stocked separately, and can be assembled to form the required assembly at indicated maintenance categories.
X	—Parts and assemblies which are not procured or stocked and the mortality of which normally is below that of the applicable end item or component. The failure of such part or assembly should result in retirement of the end item from the supply system.
X1	—Repair parts which are not procured or stocked. The requirement for such items will be filled by use of the next higher assembly component.
X2	—Repair parts which are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain same

Code	*Explanation*
	through cannibalization. Where such repair parts are not obtainable through cannibalization, requirements will be requisitioned, with accompanying justification, through normal supply channels.
G	—Major assemblies that are procured with PEMA funds for initial issue only to be used as exchanged assemblies at DSU and GSU level. These assemblies will not be stocked above DSU and GSU level or returned to depot supply level.

(2) Maintenance code, indicates the lowest category of maintenance authorized to install the listed item. The maintenance level codes are:

Code	*Explanation*
C	—Crew or operator maintenance
O	—Organizational maintenance
F	—Direct support maintenance
H	—General support maintenance
D	—Depot maintenance

(3) Recoverability code, indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are expendable. Recoverability codes are:

Code	*Explanation*
R	—Repair parts and assemblies which are economically repairable at DSU and GSU activities and normally are furnished by supply on an exchange basis.
T	—High dollar value recoverable repair parts which are subject to special handling and are issued on an exchange basis. Such repair parts normally are repaired or overhauled at depot maintenance activities.
U	—Repair parts specifically selected for salvage by reclamation units because of precious metal content, critical materials, high dollar value reusable casing or castings.
S	—Repair parts and assemblies which are economically repairable at DSU and GSU activities and normally are furnished on an exchange basis. When determined to be uneconomically repairable by DSU and GSU activities, they will be returned to the depot for evaluation and analysis prior to final disposition.

b. Federal Stock Number, Column 2. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description, Column 3. This column indicates the Federal item name and any additional description of the item required. A part number of other reference number is followed by the applicable five-digit Federal supply code for manufacturers in parentheses. Repair parts quantities included in the kits, sets, and assemblies are shown in front of the repair part name. Material required for manufacture or fabrication is identified.

d. Unit of Measure, Column 4. A two-character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based, e.g., ft, ea, pr, etc.

e. Quantity Incorporated in Unit, Column 5. This column indicates the quantity of the item used in the assembly group. A "V" appearing in this column in lieu of a quantity indicates that a definite quantity cannot be indicated (e.g., shims, spacers, etc).

f. 30-Day DS/GS Maintenance Allowances, Columns 6 and 7.

NOTE

Allowances in GS column are for GS maintenance only.

(1) The allowance columns are divided into three subcolumns. Indicated in each subcolumn, opposite the first appearance of each item, is the total quantity of items authorized for the number of equipments supported. Subsequent appearances of the same item will have the letters "REF" in the applicable allowance columns. Items authorized for use as required but not for initial stockage are identified with an asterisk in the allowance column.

(2) The quantitative allowances for DS/GS levels of maintenance will represent initial stockage for a 30-day period for the number of equipments supported.

(3) Determination of the total quantity of parts required for maintenance of more than 100 of these equipments can be accomplished by converting the equipment quantity to a decimal factor by placing a decimal point before the next to last digit of the number to indicate hundredths, and multiplying the decimal factor by the parts quantity authorized in the 51–100 allowance column. Example, authorized allowance for 51–100 equipments is 40; for 150 equipments multiply 40 by 1.50 or 60 parts required.

g. 1-Year Allowances Per 100 Equipments/ Contingency Planning Purposes, Column 8. This column indicates opposite the first appearance of each item the total quantity required for distribution and contingency planning purposes. The range of items indicates total quantities of all authorized items required to provide for adequate support of 100 equipments for 1 year.

h. Depot Maintenance Allowance Per 100

Equipments, Column 9. This column indicates, opposite the first appearance of each item, the total quantity authorized for depot maintenance of 100 equipments. Subsequent appearances of the same item will have the letters "REF" in the allowance column. Items authorized for use as required but not for initial stockage are identified with an aserisk in the allowance column.

i. Illustration, Column 10. This column is divided as follows:

(1) *Figure number, column 10a.* Indicates the figure number of the illustration in which the item is shown.

(2) *Item number, column 10b.* Indicates the callout number used to reference the item in the illustration.

B-4. Special Information

a. Parts which require manufacture or assembly at a category higher than that authorized for installation will indicate in the source column the higher category.

b. The following publications pertain to Filter Unit, Gas Particulate: EMD, 600 CFM, M46, and its components.

TM 3-4240-265-12	Operator's and Organizational Maintenance Manual, Collective Protection Equipment, CBR; NIKE-HERCULES, CONUS, M11, M12, and M13
TM 3-4240-265-20P	Organizational Maintenance Repair Parts and Special Tools List; Collective Protection Equipment, CBR; NIKE-HERCULES, CONUS, M11 (FSN 4240-937-7030), M12 (FSN 4240-937-7031), and M13 (FSN 4240-937-7032).

c. Identification of usable on codes included in column 3 of this publication is as follows:

Code	*Used on*
A—	Collective Protection Equipment, CBR: Nike-Hercules, CONUS, M11
B—	Collective Protection Equipment, CBR: Nike-Hercules, CONUS, M12
C—	Collective Protection Equipment, CBR: Nike-Hercules, CONUS, M13

d. Action change codes indicated in the left-hand margin of the listing page denotes the following:

N—Indicates an added item.
C—Indicates a change in data.
R—Indicates a change in FSN only

B-5. How to Locate Repair Parts.

a. When Federal stock number or reference number is unknown:

(1) *First.* Using the table of contents, determine the functional group, functional subgroup, or assembly group, i.e., transition, air inlet, vane-axial fan, within which the repair part belongs. This is necessary since illustrations are prepared for functional group or functional subgroup, and listings are divided into the same groups.

(2) *Second.* Find the illustration covering the functional group or functional subgroup to which the repair part belongs.

(3) *Third.* Identify the repair part on the illustration and note the illustration figure and item number of the repair part.

(4) *Fourth.* Using the repair parts listing, find the functional group or functional subgroup to which the repair part belongs and locate the illustration figure and item number noted on the illustration.

b. When the Federal stock number or reference number is known:

(1) *First.* Using the Index of Federal Stock Numbers and Reference Numbers, find the pertinent Federal stock number or reference number. This index is in ascending FSN sequence followed by a list of reference numbers in ascending alphanumeric sequence, cross-referenced to the illustration figure number and item number.

(2) *Second.* Using the Repair Part Listing, find the functional group or functional subgroup of the repair part and the illustration figure number and item number referenced in the Index of Federal Stock Numbers and Reference Numbers.

B-6. Abbreviations

Abbreviation	*Explanation*
al	aluminum
aly	alloy
assy	assembly
cad	cadmium
cfm	cubic feet per minute
cn	can
comp	composition
cont	continuous
cres	corrosion resistant steel
decon	decontamination
dia	diameter
eff	effective
emd	electric motor driven
flex	flexible
galv	galvanized
hex	hexagon
hd	head

Abbreviation	Explanation
id	inside diameter
int	internal
lg	long/length
med	medium
NC	American National coarse thread
NF	American National fine thread
nom	nominal
NPT	National pipe thread
od	outside diameter
part	particulate
pltd	plated
pt	pint
rl	roll
sht	sheet
thk	thick
tu	tube
UNC	Unified coarse thread
UNF	Unified fine thread
wd	wide/width
w/	with
zn	zinc

B-7. Federal Supply Codes for Manufacturers

Code	Manufacturer
01666	PPG Industries Inc. Adhesive Products Division 225 Belleville Ave. Bloomfield, N.J. 07003
01767	American Air Filter Co., Inc. 200 Central Ave. Louisville, Ky.
08771	General Electric Co. Telecommunication Products Dept. P.O. Box 4096, Mountain View Rd. Lynchburg, Va. 24502
08288	Military Supply Standards
15235	Crouse-Hinds Co. Wolf and 7th N St. Syracuse, N. Y. 13201
47695	Pittsburgh Plate Glass Co. Pittsburgh, Pa.
81348	Federal Specifications
81349	Military Specifications
81361	Edgewood Arsenal Aberdeen Proving Ground, MD 21010
85274	F. W. Dwyer Mfg. Co. P. O. 373 Michigan City, Ind.
96906	Military Standards

Section II. REPAIR PARTS

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr. Code	Usable on Code	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE			(7) 30-DAY GS MAINT ALLOWANC			(8) 1 Y-ALW PER 100 EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION	
						(a) 1 20	(b) 21-50	(c) 51-100	(a) 1-20	(b) 21-50	(c) 51-100			(a) FIGURE NO.	(b) ITEM NO.
P-H-S-	4240-891-4275	FILTER UNIT, GAS-PARTICULATE, EMD, 600 CFM, M46 E5-19-5378 (81361)	A	ea	2	*	*	*	*	*	*	2	5	1-1	--
			B	ea	3	*	*	*	*	*	*	2	5	1-1	--
			C	ea	2	*	*	*	*	*	*	2	5	1-1	--
		GROUP 100 - TRANSITION, AIR INLET													
P-F-R-	4240-043-5334	TRANSITION ASSEMBLY, AIR INLET D5-19-4761 (81361)		ea	1	*	*	*	*	*	*	3	10	B-1	1
P--O--	5305-989-7434	SCREW, MACH, pan hd, stl cad pltd No. 10-32UNF-2A X 1/2 lg MS35207-263 (96906)		ea	10	1	3	5	*	*	*	50	100	B-1	2
P--O--	5310-877-5797	NUT, SELF LOCKING, HEX steel, cad pltd No. 10-32UNF-3B MS21044-N3 (96906)		ea	10	1	3	5	*	*	*	50	100	B-1	3
P-O-R-	4240-043-5335	LOUVER ASSEMBLY D5-19-4766 (81361)		ea	1	*	*	*	*	*	*	3	10	B-1	4
P--F--	5305-068-0523	SCREW, TAPPING, pan hd, steel, No. 10 X 3/8 lg MS24621-42 (96906)		ea	4	*	*	*	*	*	*	2	40	B-1	5
P--F--	5340-102-2415	SPRING C5-19-4760 (81361)		ea	2	*	*	*	*	*	*	2	20	B-1	6
P--O--	4240-106-5483	PREFILTER ASSEMBLY 57-10327-3 (01767)		ea	1	*	*	*	*	*	*	3	10	B-1	7

Section II. REPAIR PARTS - Continued

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr. Code / Usable on Code	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE			(7) 30-DAY GS MAINT ALLOWANC			(8) 1 Y- ALW PER 100 EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION	
					(a) 1-20	(b) 21-50	(c) 51-100	(a) 1-20	(b) 21-50	(c) 51-100			(a) FIGURE NO.	(b) ITEM NO.
P--O--	4240-089-3865	PAD, PREFILTER 159858057 (01767)	ea	1	3	8	14	*	*	*	5 120	100	B-1	8
P--O--	4240-089-3864	REFILL, PREFILTER, AIRMAT MEDIA 3/32 in thk, 112 ft roll 57-10650-2 (01767)	rl	16 ft	1	1	2	*	*	*	21	15	B-1	9
M--P--		GASKET, Manufacture from sheet, felt, wool, pressed Type I, Class 9R5, Spec C-F-206, 1/4 thk, X 24 X 24 C5-19-4755 (81361) FSN 8305-330-0100	sht	1	*	1	1	*	*	*	12	10	B-1	10
P--F--	5305-012-1742	SCREW, MACH cross recess, stl, cad pltd, No. 12-24UNC-2A X 1/2 lg FF-S-92 (81348)	ea	4	1	2	3	*	*	*	24	40	B-1	11
P--F--	5310-753-4372	NUT, PLAIN, HEX steel, cad pltd No. 12-24 UNC-2B FF-N-836 (81348)	ea	4	1	2	3	*	*	*	24	40	B-1	12
P--F--	5310-285-7037	WASHER, STEEL 0.216 nom size MS122031 (96906)	ea	4	1	2	3	*	*	*	24	40	B-1	13
P--F--	5670-551-0829	FLANGE, FLOOR galv, 1/4 in NPT MSS5670-2 (08288)	ea	1	*	1	1	*	*	*	9	10	B-1	14

Section II. REPAIR PARTS - Continued

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr. Code / Usable on Code	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-DAY GS MAINT ALLOWANC (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) 1 Y- ALW PER 100 EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIGURE NO.	(10) (b) ITEM NO.
P--F--	5330-103-8081	GASKET, CORK AND RUBBER comp, Type II, Class 2, Grade A, 1/16 thk Spec MIL-C-6183 (81349) B5-19-4751 (81361)	ea	1	*	2	2	*	*	*	9	10	B-1	15
P--F--	8040-104-4174	ADHESIVE, 1 pt cn Z-743 (47695)	cn	V	2	5	10	*	*	*	100	10	B-1	16
		GROUP 200 - VANEAXIAL FAN												
P2-F-S	4240-089-6398	FAN, VANEAXIAL, with supports D5-19-4776 (81361)	ea	1	1	2	4	*	*	*	36	10	B-2	1
P--F--	5305-054-6671	SCREW, MACH pan hd, steel, cres, No. 8-32UNC-2A X 5/8 lg MS51957-46 (96906)	ea	2	1	1	2	*	*	*	20	20	B-2	2
P--F--	5975-953-4570	COVER, BLANK SEH-000 (15235)	ea	1	*	*	*	*	*	*	2	10	B-2	3
P--F--	5330-105-2344	GASKET 202 (15325)	ea	2	*	*	*	*	*	*	2	20	B-2	4
P--F--	8040-104-4174	ADHESIVE, 1 pt cn Z-743 (47695)	cn	V	REF	REF	REF	REF	REF	REF	REF	REF	B-2	5

Section II. REPAIR PARTS - Continued

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr Code Usable on Code	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-DAY GS MAINT ALLOWANC (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) 1 YR ALW PER 100 EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIGURE NO.	(10) (b) ITEM NO.
P--F--	5305-984-6271	SCREW, STEEL, No. 10-24UNC-2A X 5/8 lg MS35206-264 (96906)	ea	2	*	*	*	*	*	*	2	20	B-2	6
P--F--	5310-576-5752	WASHER, STEEL, int tooth No. 10 size MS35333-39 (96906)	ea	2	*	*	*	*	*	*	2	20	B-2	7
P--F--	5975-104-5018	CONDULET, size 1/2 SEH-1 (15235)	ea	1	*	*	*	*	*	*	2	10	B-2	8
P--F--	5305-269-3214	SCREW, STEEL cad pltd, 3/8-16UNC-2A X 1-1/8 lg MS90725-64 (96906)	ea	6	4	10	19	*	*	*	210	60	B-2	9
P--F--	5310-913-8881	NUT, STEEL, HEX 3/8-16UNC-2B MS51971-3(96906)	ea	6	5	12	23	*	*	*	250	60	B-2	10
P--F--	3 5310-6∧7-9541	WASHER, LOCK, HELICAL steel, 3/8 nom size MS35338-46	ea	6	5	12	23	*	*	*	250	60	V-2	11
P--F--	5310-809-4061	WASHER, FLAT steel, 3/8 nom size MS27183-15 (96906)	ea	6	4	10	19	*	*	*	210	60	B-2	12

Section II. REPAIR PARTS

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr Code Usable on Code	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) 1-YR ALW PER 100 EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIGURE NO	(10) (b) ITEM NO
P..F..	5330-103-8082	GASKET, CORK AND RUBBER comp, Type II, Class 2, Grade A, 1/16 nom thk Spec MIL-C-6183 C5-19-4757 (81361)	ea	2	2	4	8	*	*	*	72	20	B-2	13
		GROUP 300 – TRANSITION, AIR OUTLET AND FILTERS												
P..F..	4240-043-5337	TRANSITION ASSEMBLY, AIR OUTLET D5-19-4764 (81361)	ea	1	*	*	*	*	*	*	3	10	B-3	1
M..F..		GASKET, manufacture from sht, cork and rubber comp, Type II, Class 2, Spec MIL-C-6183 1/4 in X 30 in X 30 in C5-19-4756-1 (81361) FSN 5330-102-2417	..	1	*	1	1	*	*	*	6	10	B-3	2
P..F..	5305-012-1742	SCREW, MACH FF-S-92 (81348)	ea	4	REF	REF	REF	REF	REF	REF	REF	REF	B-3	3
P..F..	5310-753-4372	NUT, PLAIN, HEX FF-N-836 (81348)	ea	4	REF	REF	REF	REF	REF	REF	REF	REF	B-3	4
P..F..	5310-285-7037	WASHER, STEEL MS122031 (96906)	ea	4	REF	REF	REF	REF	REF	REF	REF	REF	B-3	5
P..F..	5670-551-0829	FLANGE, FLOOR MSS5670-2 (08288)	ea	1	REF	REF	REF	REF	REF	REF	REF	REF	B-3	6
P..F..	5330-103-8081	GASKET, CORK AND RUBBER comp, Type II, Class 2, Grade A, 1/16 thk, Spec MIL-C-6183 B5-19-4751 (81361)	ea	1	REF	REF	REF	REF	REF	REF	REF	REF	B-3	7
P. F..	8040-104-4174	ADHESIVE, 1 pt cn Z-743 (47695)	cn	V	REF	REF	REF	REF	REF	REF	REF	REF	B-3	8
P..F..	5310-913-8881	NUT, HEX MS51971-3 (96906)	ea	4	REF	REF	REF	REF	REF	REF	REF	REF	B-3	9
P..F..	5310-809-4061	WASHER, FLAT, STEEL 3/8 nom size MS27183-15 (96906)	ea	4	REF	REF	REF	REF	REF	REF	REF	REF	B-3	10
M F..		TIE ROD, manufacture from round steel bar, cold finish, comp 1018-1045 QQ-S-634, 3/8 dia X 43.50 lg B5-19-4752 (81361) FSN 9510-596-2068	ft	16	-	-	-	-	-	-	2		B-3	11

Section II. REPAIR PARTS - Continued

	(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr Code Usable on Code	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1-YR ALW PER 100 EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIGURE NO	(b) ITEM NO
C	P2 . F	4240-892-5369	*FILTER, PARTICULATE high efficiency, fire resistant, 24 X 24 X 11-1/2, M20 MIL-F-51068 (81348)	ea	1	1	2	3	*	*	*	30	100	B-3	12
	M . . H		FILTER, ADAPTER, manufacture from angle, steel, bar, comp 1020 hot rolled, QQ-S-741, 1-3/4 X 1-3/4 X 3/16 D5-19-4768 (81361) FSN 9520-289-7016		1				*	*	*	2		B-3	13
C	M . . F .		GASKET, manufacture from sht, cork and rubber comp, Type II, Class 2 Spec MIL-C-6183 1/4 in. X 30 in. X 30 in C5-19-4756-1 (81361) FSN 5330-102-2417	...	1	REF	REF	REF	REF	REF	REF	REF	REF	B-3	14
C	M . . F		GASKET, manufacture from sht, cork and rubber comp, Type II, Class 2 Spec MIL-C-6183 1/4 X 30 in. X 30 in C5-19-4756-2 (81361) FSN 5330-102-2417	.	1	REF	REF	REF	REF	REF	REF	REF	REF	B-3	15
	P . . F . .	8040-104-4174	ADHESIVE, 1 pt cn Z-743 (47695)	cn	V	REF	REF	REF	REF	REF	REF	REF	REF	B-3	16
C	P . . F . S	4240-901-8115	*FILTER, GAS, 600 CFM, C22R1 D5-19-1836 (81361)	ea	1	*	1	1	*	*	*	10	100	B-3	17
C	P. F . .	5305-180-1995	SCREW, WOOD, FLAT HEAD size 12 X 3/4 lg MS35494-789 (96906)	ea	4	*	1	1	*	*	*	12	40	B-3	18
C	P. F . .	5670-551-0829	FLANGE, FLOOR, GALV, 1/4 NPT MSS5670-2 (08288)	ea	1	REF	REF	REF	REF	REF	REF	REF	REF	B-3	19
C	P . . F . .	5330-103-8081	GASKET, cork and rubber comp, 1/16 nom thk Spec MIL-C-6183 B5-19-4751 (81361)	ea	1	REF	REF	REF	REF	REF	REF	REF	REF	B-3	20
	P . . F . .	8040-104-4174	ADHESIVE, 1 pt cn Z-743 (47695)	cn	V	REF	REF	REF	REF	REF	REF	REF	REF	B-3	21
			*Although direct support is authorized to replace filters, using units are authorized to stock these items.												

Section II. REPAIR PARTS - Continued

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr Code — Usable on Code	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) 1-YR ALW PER 100 EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIGURE NO	(10) (b) ITEM NO
M..H..		FRAME, PLENUM STACK D5-19-4769 (81361) Manufacture from the following materials											B-3	22
		ANGLE, STEEL, carbon hot rolled, comp 1020 Spec QQ-S-741, 3 X 3 X 1/4 in. D5-19-4769-1 (81361) FSN 9520-954-5666	...	1	*	*	*	*	*	*	2		B-3	23
M..H..		ANGLE, STEEL. carbon hot rolled, comp 1020 Spec QQ-S-741, 1-1/2 X 1-1/2 X 1/4 D5-19-4769-3 (81361) FSN 9520-288-1113	..	2				*	*	*	2		B-3	24
M..H..		ANGLE, STEEL, carbon hot rolled, comp 1020 Spec QQ-S-741, 2 X 2 X 1/4 D5-19-4769-5 (81361) FSN 9520-288-1115	.	2				*	*	*	2		B-3	25
M..H..		LUG, steel bar, hot rolled comp 1010-1020 Spec QQ-S-621, 1 in wd X 1/2 thk D5-19-4769-6 (81361) FSN 9510-596-2052	..	4				*	*	*	2	.	B-3	26
M..F.		GASKET, manufacture from sht, cork and rubber comp, Type II, Class 2, Spec MIL-C-6183 1/4 X 30 in X 30 in C5-19-4756-2 (81361) FSN 5330-102-2417	.	1	REF	REF	REF	REF	REF	REF	REF	REF	B-3	27
		GROUP 400 - FRAME AND SUPPORT ASSEMBLY												
P..F.	5305-269-3214	SCREW. STEEL, cad pltd, 3/8-16 UNC-2A X 1-1/8 lg MS90725-64 (96906)	ea	30	REF	REF	REF	REF	REF	REF	REF	REF	B-4	1
P. F..	5310-913-8861	NUT. HEX. STEEL 3/8-16 UNC-2B MS51971-3 (96906)	ea	30	REF	REF	REF	REF	REF	REF	REF	REF	B-4	2
P F.	5310-637-9541	WASHER. LOCK HELICAL. STL 3/8 nom size MS35338-46 (96906)	ea	30	REF	REF	REF	REF	REF	REF	REF	REF	B-4	3

Section II. REPAIR PARTS - Continued

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr Code	Usable on Code	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) 1-YR ALW PER 100 EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIGURE NO	(10) (b) ITEM NO
P..F.	5310-809-4061	WASHER, FLAT, STEEL, 3/8 nom size MS27183-15 (96906)		ea	30	REF	REF	REF	REF	REF	REF	REF	REF	B-4	4
M..H..		GUSSET, manufacture from steel strip, low carbon commercial quality, Spec QQ-S-698, 125 thk X 6 in wd B5-19-4753 (81361) FSN 9515-119-0435		...	6				*	*	*	2	.	B-4	5
M..H..		SUPPORT, RAIL, manufacture from angle, steel bar, hot rolled, Spec QQ-S-741 comp 1020 2 in X 2 in X 1/4 in C5-19-4758 (81361) FSN 9520-288-1115		...	3				*	*	*	2	.	B-4	6

Section II. REPAIR PARTS - Continued

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr. Code Usable on Code	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE			(7) 30-DAY GS MAINT ALLOWANC			(8) 1 Y-ALW PER 100 EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION	
					(a) 1 20	(b) 21-50	(c) 51-100	(a) 1-20	(b) 21-50	(c) 51-100			(a) FIGURE NO.	(b) ITEM NO.
M--H--		RAIL, RIGHT HAND, Manufacture from angle steel, carbon, hot rolled comp 1020, Spec QQ-S-741 2 X 2 X 1/4 in D5-19-4771 (81361) FSN 9520-288-1115	--	1				REF	REF	REF	REF	REF	B-4	7
M--H--		RAIL, LEFT HAND, Manufacture from angle, steel, carbon, hot rolled, comp 1020, 2 X 2 X 1/4 in QQ-S-741 D5-19-4772 (81361) FSN 9520-288-1115	--	1				REF	REF	REF	REF	REF	B-4	8
P--F--	4240-043-5338	SUPPORT, PARTICULATE FILTER C5-19-4759 (81361)	ea	1	*	*	*	*	*	*	2	10	B-4	9

Section III. SPECIAL TOOLS, TEST AND SUPPORT EQUIPMENT

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr. Code / Usable on Code	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-DAY GS MAINT ALLOWANC (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) 1 Y-ALW PER 100 EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIGURE NO.	(10) (b) ITEM NO.
		GROUP 500 - SPECIAL TOOLS, TEST AND SUPPORT EQUIPMENT												
---0-R	4240-121-5866	AIRFLOW MEASURING DEVICE, RESISTANCE E5-19-5416 (81361)	ea	1	*	*	1	*	*	*	5	2	B-5	--
---0--	6685-198-5789	GAGE, MAGNEHELIC 200-1/2 (85274)	ea	1	2	4	8	*	*	*	72	10	B-5	1
---0-R	4240-122-9544	LOADER, FILTER PAPER, MANUAL 57-10868 (01767)	ea	1	*	*	1	*	*	*	5	2	B-6	--

Section IV. INDEX - FEDERAL STOCK NUMBER AND REFERENCE NUMBER CROSS-REFERENCE TO FIGURE AND ITEM NUMBER

Stock Number	Figure No.	Item No.
4240-043-5334	B-1	1
4240-043-5335	B-1	4
4240-043-5337	B-3	1
4240-043-5338	B-4	9
4240-089-3864	B-1	9
4240-089-3865	B-1	8
4240-089-6398	B-2	1
4240-106-5483	B-1	7
4240-121-5866	B-5	-
4240-122-9544	B-6	-
4240-891-4275	1-1	-
4240-892-5369	B-3	12
4240-901-8115	B-3	17
5305-012-1742	B-1	11
5305-054-6671	B-2	2
5305-068-0523	B-1	5
5305-180-1995	B-3	18
5305-269-3214	B-2	9
	B-4	1
5305-952-1511	B-3	3
5305-984-6271	B-2	6
5305-989-7434	B-1	2
5310-285-7037	B-1	13
	B-3	5
5310-576-5752	B-2	7
5310-637-9541	B-2	11
	B-4	3
5310-753-4372	B-1	12
	B-3	4
5310-809-4061	B-2	12
	B-3	10
	B-4	4
5310-877-5797	B-1	3
5310-913-8881	B-2	10
	B-3	9
	B-4	2
5330-102-2417	B-3	2
	B-3	14
	B-3	15
	B-3	27
5330-103-8081	B-1	15
	B-3	7
	B-3	20
5330-103-8082	B-2	13
5330-105-2344	B-2	4
5340-102-2415	B-1	6

Section IV. INDEX - FEDERAL STOCK NUMBER AND REFERENCE NUMBER CROSS-REFERENCE TO FIGURE AND ITEM NUMBER

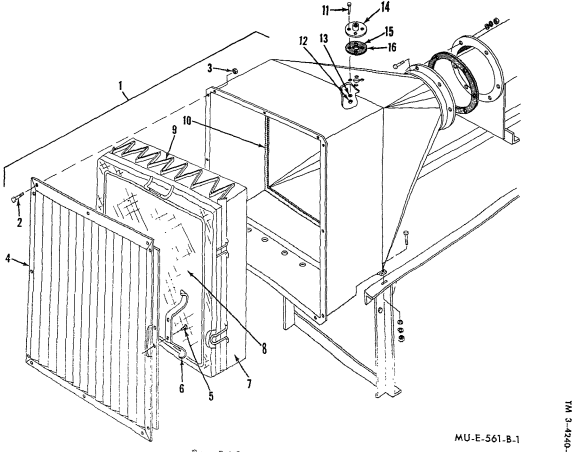
Stock Number	Figure No.	Item No.	Stock Number	Figure No.	Item No.
5670-551-0829	B-1	14			
	B-3	6			
	B-3	19			
5975-104-5018	B-2	8			
5975-953-4570	B-2	3			
6685-198-5789	B-5	1			
8040-104-4174	B-1	16			
	B-2	5			
	B-3	8			
	B-3	16			
	B-3	21			
8305-330-0100	B-1	10			
9510-596-2052	B-3	26			
9510-596-2068	B-3	11			
9515-119-0435	B-4	5			
9520-288-1113	B-3	24			
9520-288-1115	B-3	25			
	B-4	6			
	B-4	7			
	B-4	8			
9520-289-7016	B-3	13			
9520-954-5666	B-3	23			

Section IV. INDEX - FEDERAL STOCK NUMBER AND REFERENCE NUMBER CROSS-REFERENCE TO FIGURE AND ITEM NUMBER

Reference No.	Mfg Code	Fig No.	Item No.
B5-19-4751	81361	B-1 B-3 B-3	15 7 20
B5-19-4752	81361	B-3	11
B5-19-4753	81361	B-4	5
C5-19-4755	81361	B-1	10
C5-19-4756-1	81361	B-3 B-3	2 14
C5-19-4756-2	81361	B-3 B-3	15 27
C5-19-4757	81361	B-2	13
C5-19-4758	81361	B-4	6
C5-19-4759	81361	B-4	9
C5-19-4760	81361	B-1	6
D5-19-1836	81361	B-3	17
D5-19-4761	81361	B-1	1
D5-19-4764	81361	B-3	1
D5-19-4766	81361	B-1	4
D5-19-4768	81361	B-3	13
D5-19-4769	81361	B-3	22
D5-19-4769-1	81361	B-3	23
D5-19-4769-3	81361	B-3	24
D5-19-4769-5	81361	B-3	25
D5-19-4769-6	81361	B-3	26
D5-19-4771	81361	B-4	7
D5-19-4772	81361	B-4	8
D5-19-4776	81361	B-2	1
E5-19-5378	81361	1-1	-
E5-19-5416	81361	B-5	-
FF-N-836	81348	B-1 B-3	12 4
FF-S-92	81348	B-1 B-3	11 3
MIL-F-51068	81348	B-3	12
MS122031	96906	B-1 B-3	13 5
MS21044-N3	96906	B-1	3
MS24621-42	96906	B-1	5
MS27183-15	96906	B-2 B-3 B-4	12 10 4
MS35206-264	96906	B-2	6
MS35207-263	96906	B-1	2
MS35333-39	96906	B-2	7
MS35338-46	96906	B-2 B-4	11 3

Section IV. INDEX - FEDERAL STOCK NUMBER AND REFERENCE NUMBER CROSS-REFERENCE TO FIGURE AND ITEM NUMBER

Reference No.	Mfg Code	Fig No.	Item No.	Reference No.	Mfg Code	Fig No.	Item No.
MS35492-283	96906	B-3	18				
MS51957-46	96906	B-2	2				
MS51971-3	96906	B-2	10				
		B-3	9				
		B-4	2				
MS90725-64	96906	B-2	9				
		B-4	1				
MSS5670-2	08288	B-1	14				
		B-3	6				
		B-3	19				
N80P19008C13	08771	B-3	3				
SEH-000	15325	B-2	3				
SEH-1	15325	B-2	8				
Z-743	47695	B-1	16				
		B-2	5				
Z-743	01666	B-3	8				
		B-3	16				
		B-3	21				
159858057	01767	B-1	8				
200-1/2	85274	B-5	1				
202	15325	B-2	4				
57-10327-3	01767	B-1	7				
57-10650-2	01767	B-1	9				
57-10868	01767	B-1	7				



MU-E-561-B-1

Figure B-1. Transition, air inlet.

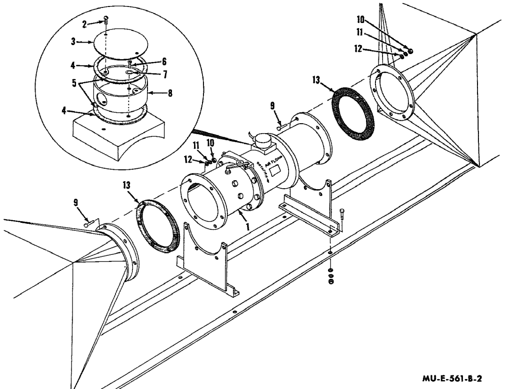


Figure B-2. Vaneaxial fan.

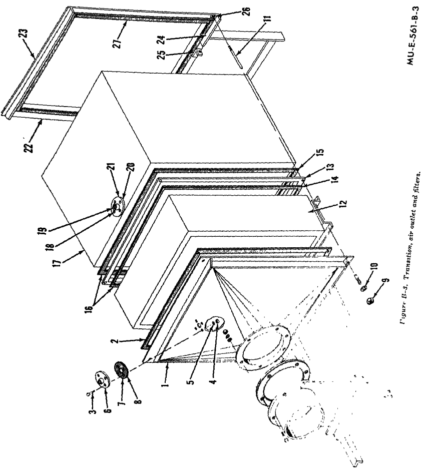


Figure B-3. Transition, air outlet and filters.

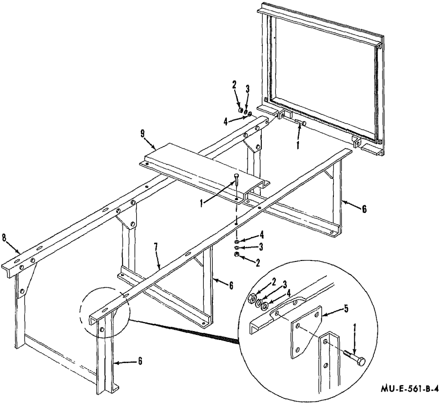


Figure B-4. Frame and support assemblies.

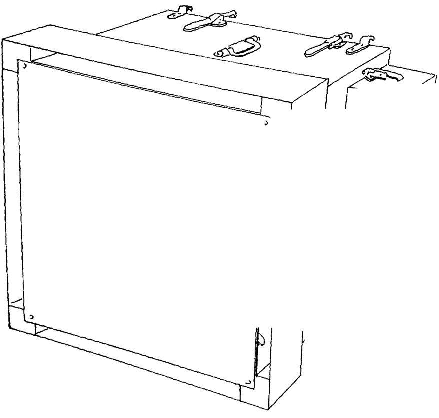


Figure B-5. Airflow measuring device, resistance.

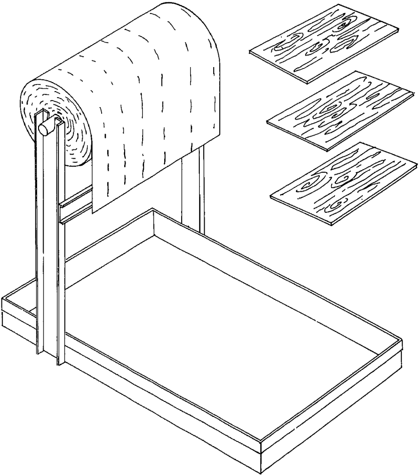


Figure B-6. Loader, filter paper, manual.

By Order of the Secretary of the Army:

W. C. WESTMORELAND,
General, United States Army,
Chief of Staff.

Official:

KENNETH G. WICKHAM,
Major General, United States Army,
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- USAPS 2
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- USATC (1)
- POE (1)
- EAMTMTS (1)
- WAMTMTS (1)
- *MOTBA (1)*
- *MOTBY (1)*
- *MOTKI (1)*
- *MOTSU (1)*
- USAAPSA (25)
- Arsenals (3) except
  - *Edgewood (75)*
- PG (5)
- Ft Knox FLDMS (10)
- *Units org* under fol TOE:- 2 each
  - 3-7
  - 3-32
  - 3-36
  - 3-500
  - 29-118
  - 29-119
  - 29-124
  - 29-126
  - 29-134
  - 29-136
  - 29-127
  - 29-500

ARNG: None.

USAR: None.

For explanation of abbreviations used, see AR 310-50.

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